REGEIVED CENTRAL FAX CENTER

2001/010

MAY 2 4 2006

PTO/S8/21 (09-04)
Approved for use through 07/31/2005. OMB 0851-0031
Patent and Trademark Office; J.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 19	95, no persons are required to respond to a	collection of information unless i disc	
(Application Number	10/699,491	
TRANSMITTAL	Filing Date	October 31, 2003	
FORM	First Named Inventor	Yulchi likubo et al.	
	Art Unil	1621	
<u> </u>	Examiner Name	Unknown	
(to be used for all correspondence after int	10 Attorney Docket Number	PC3-059	
Total Number of Pages in This Submission	1.0	10000	/
	ENCLOSURES (Check	ill that apply)	
Fee Transmittal Form	Drawing(s)		vance Communication to TC
Fee Allached	Licensing-related Papers		and Interferences
Amendment/Reply After Final After Final After Final After Final After Final Extension of Time Request Express Abandonment Request Supplemental Information Disclosure Statement Certified Copy of Priority Document(s) Reply to Missing Parts/ Incomplete Application Reply to Missing Parts under 37 CFR 1.52 or 1.53	1	ion Propretary Address Statu: Let Other End below): Form PTO-: 449	losure(s) (pleasę Identify
SIGN	<u> </u>	DRNEY, OR AGENT	
Firm Name Wells Styllogh P.S.			
Signature			
Printed name Robert C. Hyta			
Date 5/24/07		Reg. No. 46,791	
	CERTIFICATE OF TRANSMIS		States Rectal Sension with
I hereby certify that this correspondence is sufficient postage as first class mail in an eithe date shown below: Sent by Signature		or Patents, P.O. Box 1450, Alexa	
muri	el D. Dunniga	y U	
Typed or orinled name Muriel G. Dunn	igan (Date May	y <u>24</u> , 2006

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentially is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the in information office. Any comments on the amount of time you require to complete this form anti/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office. U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select opt on 2.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Serial No	10/699,491
Filing Date	
Assignee	PCBU Services, Inc.
	1621
	Unknown
	PC3-059
	on Products and Processes for Separating

BEST AVAILABLE COPY

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

The attached Form PTO-1449 is submitted in compliance with 37 C.F.R. §§ 1.56, 1.97 and 1.98. Pursuant to Federal Register Vol. 69, No. 182, pg. 56542 (September 21, 2004) no copies on any cited U.S. patents or U.S. published application are included herewith. No admission is made regarding whether all the submitted references are prior art.

The listed references were cited by, or submitted to, the Office in the parent, co-pending application of the above-identified application. The above-identified application is a continuation or divisional application of co-pending application Serial No. 09/966,158, filed September 28, 2001. Such prior disclosure is sufficient for the above-identified application as far as copies of the references are concerned. 37 C.F.R. § 1.98(d) and MPEP § 609(2).

This Supplemental Information Disclosure Statement is being filed before receipt of the first Office Action. Therefore, no fee is believed to be required. However, in the event that a fee is required please charge the fee specified under 37 C.F.R. § 1.17(p) to Deposit Account No. 23-0925.

Citation of these references is respectfully requested.

Respectfully submitted,

Dated: 5/24/00

By:

Reg. No. 46,791

Sheet 1 of 7

Form PTQ-1449

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

LIST OF ART CITED BY APPLICANT (Use several sheets it necessary)

ATTY, DOCKET NO. PC3-059 SERIAL NO. 10/699,491

APPLICANT: Yuichi ikubo, el al

FILING DATE October 31, 2003 GROUP 1621

U.S. PATENT DOCUMENTS

*Examiner's Initials		Document Number	Date	Name	Class	Şubclass	Filing Data (f Appropriate
	М	1.132,636	03/1915	Taylor, et al			
	AB	1.926,395	09/1933	T. Midgley, Jr.			
	AC	1,926,396	09/1933	Midgley, Jr.			
	AC	2.021,981	11/1935	Bichowsky			
	AC	2,413,696	01/1947	Downing, et al			
	AF	2,456,028	12/1948	Simons			
	ΛG	2,519,983	08/1950	Simons			
	ΛΗ	3,080,430	03/1963	Cohen			
	۸	3,479,286	11/1969	Gambaretto, et al			
	AJ.	3,656,553	04/1972	Rainaldi, et al			
	AX	3,715,438	02/1973	Huggett			
181	AL	3,822,207	07/1974	Howard, et at			
	АН	3,844,354	10/1974	Larsen			
	AN	4,014,799	03/1977	Owens			
· <u>-</u> ·	A0	4,225,404	09/1980	Dietrich, et al			
	ΑP	4,226,728	10/1980	Kung			
	۸۵	4,446.923	05/1984	Martin			
	AR	4,459,213	04/1972	Uchida, et al			
	AS	4,536,298	08/1985	Kamei, et al.			
	AT	4,668,407	05/1987	Gerard, et al			-
	ΑŲ	4,810,403	03/1989	Bivens, et al			
	ΑV	4.826,610	05/1989	Thacker	_		

"EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Sheet 2 of 7

Form PTO	1449			MENT OF COMMERCE TRADEMARK OFFICE	ATTY, DOCKE PC3-059	T NO.		IAL NO. 99,491
		LIST OF ART CITE! (Use several shee		NT	APPLIÇANT:	Yulchi i kı	ubo, et al	
					FILING DATE October 31, 20	03	GRC 1621	
U.S. PATE	NT DOC	CUMENTS			-			*
"Examiner's Iniúats		Ocument Number	Oste	Name		Class	Subclass	Filing Date If Appropriate
	АА	4,851.595	07/1989	Gumprecht				
	AB	4,876,405	10/1989	Gervasutti				
	AC	4.937,398	06/1990	Tung. et al				
	AD	4,945,119	07/1990	Smits, et al				
	AE	4,954,271	09/1990	Green				
	AF	5,040,609	08/1991	Dougherty, et al				
	AG	5,084.190	01/1992	Fernandez				
	AH	5,115,868	05/1992	Dougherty Jr., et al				
	Al	5,141,654	08/1992	Fernandez				
	AJ	5.523.501	06/1996	Keliner. et al.				
	AK	5,562,861	10/1996	Nimitz, et al.				
	AL	5,730,894	03/1998	Minor				
	A44	6,065,547	05/2000	Ellis, et al.				
	AN	6,291.729	09/2001	Flao				
	AD	6,346,203 B1	02/2002	Robin, et al.				
	ΑP	6,461,530	10/2002	Robin, et al.	·			
	AQ	6,478,979	11/2002	Rivers, et al.				
	AFI .	6,763,894	07/2004	Schoenrock				
	AS	6,849,194	02/2005	Robin, et al.				
	AT	5,416,246	05/1995	Krespan et al.				
EXAMINER	•	DATE CONSID	ERED					
*EXAMINER:	Initial if	reference considered, whopy of this form with next	ether or not citation to	on is in conformance with MP applicant.	PEP 609; Draw line li	hrough c ta	ation if not in a	onformance and not

Sheet 3 of 7

Form PTO-1449 SERIAL NO. U.S. DEPARTMENT OF COMMERCE ATTY, DOCKET NO. PATENT AND TRADEMARK OFFICE PC3-059 10/699,491 LIST OF ART CITED BY APPLICANT APPLICANT: Yulch likubo, et al (Use several sheets if necessary) FILING DATE GROUP October 31, 2003 1621 FOREIGN PATENT DOCUMENTS Class Subclass Trenstation Date Country Document ÇA 902590A 08/1962 Canada A9 EP 0 039 471 A1 11/1981 Europe 01/1998 **EPO** EP 0 253 410 AD EP 0 383 443 A2 08/1990 Europe ΛE 06/1991 EP 0 434 409 A Europe Æ EP 0 481 618 A1 04/1992 Europe AC. EP 0 570 367 B1 01/1993 Europe RU 2068718 C1 08/1990 Russia M 09/1970 1,546,505 Germany 03/1991 WIPO WO 91/02564 WO 91/04766 04/1991 **PCT** 09/1991 PCT WO 91/12853 . WO 93/24586 12/1993 **PCT** WO 98/37043 08/1998 PCT PCT WO 96/40834 12/1996 AP WO 03/029173 04/2003 PCT 10/1953 UK 698,386 AR GB 1,132,636 11/1968 UK 45 JP 51034595 09/1974 Japan AT JP 57-93070-A 06/1982 Japan Laid Open Hei 1-05/1989 Japan 115999 EXAMINER DATE CONSIDERED *EXAMINER: Initial if reference considered, whether or not cliation is in conformance with MPEP 609. Draw line through a litation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Sheet 4 of 7

Form PTO-	·1449			MENT OF COMMERCE TRADEMARK OFFICE	ATTY, DOCKE PC3-059	T NO.			NAL NO. 199,491	
		LIST OF ART CITED (Use several sheets	BY APPLICAN Bill necessary)	VT	APPLIÇANT:	Yulchi iki	ubo,	et al		
					FILING DATE October 31, 200	03		GR0 1621		
FOREIGN	PATEN	T DOCUMENTS, CON	T.							
	**	Sho 50-50864 (Laid Open Sho 51-131100)	04/1975	Japan			_			
	AB	Sho 48-19093	03/1973	Japan						
	AC	Sha 52-25679	07/1977	Japan						
	A0	Lai Open Hei 4- 96770	03/1992	Japan						
	AE									
	AF						<u>-</u>			
	AG									
	Art					·				
	AI									<u> </u>
	A.									
	AK									
	AL		ļ						i	
	АМ									
	AN									
	AO	<u> </u>	<u> </u>			<u> </u>				<u> </u>
	AP								ļ	
	AO		<u> </u>			<u> </u>				<u> </u>
	AR					<u> </u>				
	AS					<u> </u>				
	AT					<u> </u>				
	NI .		<u> </u>			L_				
	44V									_
EXAMINER		DATE CONSIDER	RED							
*EXAMINER; considered t	initijai li i nclude co	reference considered, when opy of this form with next co	ther or not citatio communication to	on is in conformance with MP applicant.	EP 609; Draw line th	hrough ci at	ion it r	nat in a	onformance	end not

Sheet 5 of 7

Form PTO-1449 ATTY. DOCKET NO. U.S. DEPARTMENT OF COMMERCE SERIAL NO. PATENT AND TRADEMARK OFFICE PC3-059 10/699,491 LIST OF ART CITED BY APPLICANT . APPLICANT: Yuichi likubo, et al (Use several sheets if necessary) FILING DATE GROUP October 31, 2003 1621 OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.) McFarland, Mack, "Chlorofluorocarbons and ozone", 1989, Environ. Sci. Technol., Vc . 23, No. 10, pp. 1203-1207 Malcomb, J.E., "Report 1177 Interim Report Vaporizing Fire Extinguishing Agents", Airgust 1950, Engineer Research AB and Development Laboratories, Petroleum and Distribution Branch, pp. i-90 Wuebbles, Donald J., "The Relative Efficiency of a Number of Halocarbons for Destroying Stratospheric Ozone", AC January 1961, Lawrence Livermore National Laboratory, University of California, pp. -11 Wuebbles, Donald J., "Chlorocarbon Emission Scenarios: Potential Impact on Strato pheric Ozone", February 1983, Journal of Geophysical Research, Vol. 88, No. C2, pp. 1433-1443 Molina, et al., "Ultraviolet Absorption Cross Sections of Several Brominated Methanes and Ethanes of Atmospheric AC Interest", February 1982, J. Phys. Chem., 1982, 86, 2672-2676 The United Nations Environment Program, Montreal Protocol Assessment, Technology Review, "Report of the Halons Technical Options Committee", June 1989, Draft for Peer Review Larsen, Eric R., "Halogenated Fire Extinguishants: Flame Suppression by a Physical Mechanism?", 1975, Halogens AG Research Laboratory, The Dow Chemical Corporation, Midland, Michigan, pp. 976-402 Belles, Frank E., "Chemical Action of Halogenated Agents in Fire Extinguishing", 195f, National Advisory Committee AH for Aeronautices, Technical Note 3565, pp. 1-30 Kauschka. Von Gunther, et al., "Calculation of thermodynamic substance data and rei ction balance with poly- and At perhalogen hydrocarbons", October 1976, Chemistry Section of the Humboldt Univer ity in Berlin, Vol. 10, pp. 1-22 Moore, Jeanne P., et al., "Halon Alternatives Extinguishment Testing", 1989. Center ft r Technologies to Protect Stratospheric Ozone, New Mexico Englneering Institute, University of New Mexico, Al suquerque, New Mexico, presented at the International Conference on CFC & Halon Alternatives, October 10-11, 1989, Washington, D.C., pp. Smart. B.E.. "Fluorocarbons", 1983, The Chemistry of Functional Groups, Supplemen D, Chapter 14, pp. 803-855 Chemical Encyclopedia, "Bolshaya Rossiiskaya Entsiklopedia" Moscow, 1992, Scienti ic Publishing House, Vol. 3, Med-Pol The United Nations Environment Program. Montreal Protocol Assessment, Technology Review, "Final Report of the ΑМ Halons - Technical Options Committee". August 1989 Reld, Robert C., "The properties of gases and liquids", 1987, pp. 153-157 AN "Part IV The Evolution of the Montreal Protocol", 1987, Section 4.1 and 4.2, pp. 265-2"5 40 Hynes, Robert G., et al., 'Shock-Tube Study of the Pyrolysis of the Halon Replacement Molecule CF₂CHFCF₃", 1999, J. Phys. Chem. A, Vol. 103, pp. 54-61 Joint Assessment of Commodity Chemicals No. 24. Pentalluoroethane (HFC 125), (ECETOC) May 1994, pp. 14-20 ΑC Kubota, Kazuo, "Current State and Measures Related to Chlorofluorocarbon Rogulatic ns. Part I". 1989. Valqua AΩ Review, Vol. 33, No. 2, pp. 1-8 (English translation - pp. 1-18) Malcolm, J.E., "Halogenated Extinguishing Agents", Part II Research at the Corps of Engineers' Laboratories, 1951, A\$ NFPA Quarterly, pp. 119-131 Nelson, Thomas P., "Findings of the Chlorofluorocarbon Chemical Substitutes International Committee", April 1988, AT U.S. Environmental Protection Agency, Air and Energy Engineering Research Labora: 279, EPA/600/9-88/009, pp. i-Smart, Bruce E., Fluorinated Organic Molecules, 1988, Molecular Structure and Energetics, Vol. 3. pp. 141, 152 ш Tominaga, Takeshi, "Global and Technical Countermeasures Against Flon", 1989, The Nikkan Kogyo Shinbun, Ltd., pp. 134-137, 156-163, 170-174 (English translation) EXAMINER DATE CONSIDERED *EXAMINER: Initial II reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Sheet 6 of 7

Form PTO-1449	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. PC3-059	SERIAL NO. 10/699,491					
	LIST OF ART CITED BY APPLICANT (Use several sheets if necessary)	APPLICANT: Yuichi I k	cubo, et al					
		FILING DATE October 31, 2003	GROUP 1621					
OTHER REFERE	NCES (including Author, Title, Date, Pertinent Pages, Etc.)							
	Index to Decisions and Annexes of the Parties to the Montrea	al Protocol, Helsinki Mee ir	ng, p. 79, 128, 241, 1989.					
AB	Marshal Sittig, Chemical Process Monograph No. 22, Fluorin	Marshal Sittig, Chemical Process Monograph No. 22, Fluorinated Hydrocarbons and Polymers, 1986, page 13.						
AC	McLinden, Ph.D. Didion, Ph.D. "Quest for Alternatives", Ashro	ae Journal, December 15 5	37, ρgs. 69-78.					
AD	National Fire Protection Association, NFPA 2001 "Clean Age	nt Fire Extinguishing Sys:	ems" pps. 2001-1 and 2001-14					
AF	Creitz, Journal of Research of the National Bureau of Standa	rd, Vol. 65A, No. 4, pp. 23	9-396 (1961).					
AF	Simons, Fire Extinguishing Agents, in H.G. Bryce, Industrial A of Hudlicky, Milos, Chemiatry of Organic Fluorine Compound		stry, at pages 354-358, Vol. 5					
ACG	R. Hirst and K. Booth, Measurement of Flame-Extinguishing (1977).	Concentrations, Fire Tec u	nology, Vol. 13(4): 296-315					
AH	Final Report on Extinguishing Agents for the Period Septemb Conducted by Purdue Research Foundation and the Departm 009-engr 507, Army Engineers Research and Development L	ent of Chemistry, Purdu :						
A.	Research at the Corps of Engineers Laboratories, Halogenat (October, 1951).	ed Extinguishing Agents. I	NFPA Quarterly pgs. 118-131,					
~	Decision of the Technical Board of Appeal Regarding Europe	an Patent No. 0439579, \	lovember 14, 2001.					
AK	Banks, Findings of the Chlorofluorocarbon Chemical Substitu Report A-1-A-5, 05/1987.	tes International Commit e	ee, Appendix A: summary					
AL	Hogue, Cheryl, "Substitutes for Halons: No One Chemical Su 493-495.	Itable ⁻ , Intl. Environment F	Reporter, Nov. 21, 1990, pp.					
АМ	Federal Register Vol. 58, No. 90, May 12, 1993, pp. 28136-28	3149 and 28176-28185.						
43	"FM-2000, The New Solution for Fire Protection", June, 1993	, 11 pages.						
۸٥	Moore, P.E., "Fluorocarbon Halon Alternatives", Fire Salety E	ngineering, 1997, 3 pages	3.					
АР	Hampson, Roger D., "The Success of FM-2008", Fire Safety	Engineering, Vol. 2, No.	, 1995, pgs. 21-23.					
AG	"Kiddie FM-200® Fire Suppression Systems". May 1994, 2 pa	ages						
АЯ	"Real-Scale Halon Replacement Testing," CFC/Halon News,	March 1996, one page						
AS	FM-2009 Waterless Fire Protection for Marine Applications,"	2003, 8 pages						
EXAMINER	DATE CONSIDERED							
	reference considered, whether or not chatton is in conformance with MP opy of this form with next communication to applicant.	EP 609; Draw line through ci a	ation if not in conformance and not					

Sheet 7 of 7

Form PTO-1449	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY, DOCKET NO. PC3-059	SERIAL NO. 10/699,491
	LIST OF ART CITED BY APPLICANT (Use several sheets if necessary)	APPLICANT: Yuichi I kul	bo, et al
		FILING DATE October 31, 2003	GROUP 1621
OTHER REFERE	NCES, CON'T. (including Author, Title, Date. Pertinent Pages, E	Elc.)	
AA	Burkland, Robert E., "When It Comes to Fire Protection - Sprone page	sed Counts," Automotive Ind	lustry Agenda, March 2002
Ab	Mike Bennett, 'Halon Replacement for Aviation Systems,' Int September 29 through October 1, 1992, Washington, D.C., p		Alternatives Conference,
AC	Thornton, Al, "FM-200, A Unique Fire Fighting Agent," 1997 Protection, December 10, 1997, 10 pages	Taipei International Confi rei	псе оп Охоле Layer
AD	The Appeal Decision in invalidation action for Patent No. 256	10075, 10 pages (translat on)
AE	International Fire Protection, "Great Lakes Chemical Corpora Nov/Dec 2000, 4 pages	alion - Company Profile." \	MDM Publication, Issue 4,
AF	http://www.e1.greatlakes.com/wtp/product/isp/articles.isp "Air "Healthcare Facilities Protected by FM-200® Waterless Fire F protected by FM-200®," and "Casino Properties Protected by	Protection Systems," "Mullet	
AG	Nimitz , et al., "Halocarbons as Halon-Replacements: Techn Research Institute, University of New Mexico, Final Report, N		New Mexico Engineering
. AH	¹ A Review of the Toxic and Asphyxiating Hazards of Clean A Halon Alternatives Group, February 1995, 22 pages	gent Replacements for Halo	n 1301," A Report by the
Au	Hart-Winchester, *A Burning Issue: What Products Will Repl March/April 1995, pages 13-18	ace Halon 1301?" The Com	puter Operations Manager
N	Maranghides, et al., "Discharge System Modifications: Real Technical Working Conference, Albuquerque, New Maxico, I	Scale Halon 1301 Replacen May 7-9, 1996, 12 pages	nent Testing," Halon Optlor
AK	Ellis. "Pleasure Boat Fire Extinguisher Choices," Burgee 26,	November 1996	
AL	"Scientific Assessment of Stratospheric Ozone: 1989", spone	sored by the United Natio 1s	Environmental Program
АМ	Nat'l Fire Protection Assoc., Boston, Fire Protection Handbo	ook* 14 th ed., 2001, Sec 1 3/0	Chap 4, pp. 13-20 to 13-26
AX	Fukaya+ Journal of Flourine Chemistry, "First Extinguishing A	Ability of Perfluoroalkylam ne	s and 2000, pp. 143-14
AO	Burns+, "Flourine Compounds in Anaesthesia" 1982, Vol. 37	, pp. 278-284	
АР			
AO			
AR			
XAMINER	DATE CONSIDERED		
			

This Page is Inserted by IFW Indexing and Scanning Operations and is not part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

IMAGES ARE BEST AVAILABLE COPY.

☐ OTHER: ___

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.